

Correspondence

Earthquakes and Myocardial Ischemia

TO THE EDITOR: A series of nearby earthquakes, beginning with the Landers, California, tremor (7.5 on the Richter scale) of June 1992 followed by thousands of aftershocks of varying intensity caused apprehension in many of my patients with known coronary artery disease.

A 74-year-old woman was undergoing a Holter monitor study to evaluate recurrent atrial fibrillation when she

had an asymptomatic episode of 3.5-mm ST depression at 5:48 AM, June 28, 1992, the same instant as an aftershock graded at 4.2 on the Richter scale (Figure 1). She recalls being slightly apprehensive at that time, but had no specific symptoms. A stress echocardiography was then done that was markedly abnormal, and she underwent coronary arteriography, which showed high-grade, two-vessel coronary disease. She has never had angina pectoris and is being treated with conservative medical management.

Earthquake-induced stress can increase cardiac mortality.¹ Vouridis and colleagues reported cardiac rhythm disturbance measured by Holter monitoring during an earthquake.² This may be the first documented case of earthquake-induced (silent) myocardial ischemia.

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REFERENCES

1. Katsouyanni, Kogevinas M, Trichopoulos D: Earthquake-related stress and cardiac mortality. *Int J Epidemiol* 1986; 15:326-330
2. Vouridis EM, Mallios KD, Papantonis TM: Holter monitoring during 1981 Athens earthquakes (Letter). *Lancet* 1983; 1:1281-1282

High Tech in a Low Tech Country

TO THE EDITOR: A 7-year-old boy from a Central American country was seen at the pediatric cardiac clinic at San Francisco General Hospital Medical Center recently holding in his hand a photo of a two-dimensional echocardiogram that purported to show an atrial septal defect. This robust boy's physician had discovered a murmur and referred him for an echocardiogram in his native country that was interpreted as showing a septal defect that needed immediate open heart surgery in the United States.

The family had sold their home and many of their possessions to raise enough money to come to this country for the operation. Along the way, they stopped at the heart clinic, where the clinical findings were more suggestive of a functional murmur. An echocardiogram confirmed that there was no atrial septal or other defect. Apparently the original echocardiographer had misinterpreted the "dropout" that often occurs when viewing the atrial septum with 2D echocardiography as a secundum type defect. Following the revelation that her child's heart was normal, the mother was pensive and anxious. She pointed out that the family had been worried about the boy's heart for a long time, had been convinced that major surgery would be necessary, and therefore found it hard, in a relatively brief period of time, to accept without any doubt the new information that the heart was fine. She needed much reassurance and a letter in her hand stating that all was well before she felt comfortable in returning to a new home in Central America.



A



B



C

Figure 1.—A 24-hour Holter monitor electrocardiographic study was being done on a 74-year-old woman when an earthquake aftershock occurred that registered 4.2 on the Richter scale. Timed tracings are shown at (A) 5:47:59 AM, (B) 5:48:15 AM, and (C) 5:49:05 AM.

The enthusiastic spread of American medical technology to third world countries might be tempered if our colleagues lecturing at national and international medical meetings were more forthcoming about the risks and mistakes that can be made. Otherwise, many more patients will encounter problems similar to those of this little boy and his family.

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Testing Cardiac Function

TO THE EDITOR: Thank you for the excellent article, "Suggested Guidelines for Rating Cardiac Disability in Workers' Compensation," in the March 1993 issue.¹ A focus on cardiac symptoms of exercise is often ignored, limiting the usefulness of a stress test. A dobutamine hydrochloride echocardiogram, although it does not provide a met level, can be a useful substitute to assess both coronary insufficiency and cardiac function during exercise.

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REFERENCE

1. Clark WL, Alpern HL, Breall WS, et al: Suggested guidelines for rating cardiac disability in workers' compensation. *West J Med* 1993; 158:263-267

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Dr Markovitz Responds

TO THE EDITOR: Dr Haegelin has suggested a dobutamine echocardiogram as an additional useful test to assess both coronary insufficiency and cardiac function during exercise. He is correct. Many other tests can be used to assess cardiac disability. The purpose of our guidelines was to provide a rational and reasonable system without going into numerous expensive tests.

A dobutamine echocardiogram would be useful, especially in patients who could not exercise, but many other tests might be used. We think that if a test outside the guidelines is used, it should be fully justified and conform to the spirit of cost control.

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An Offshore Pharmacy—A Bargain or a Danger?

TO THE EDITOR: With the continuing upward spiral of medical care and prescription drug costs, persons on limited incomes are experiencing great difficulty in paying for life-saving medications. So it is not surprising that someone would come along to offer a convenient discount drug service. And no prescription is necessary.

Medicine Club International, advertising itself as an "international pharmacy," claims to save the buyer up to 60% on costly name-brand medications by importing European and Canadian generic equivalents. Purportedly, they obtain medicines from countries with regulated prices as well as from manufacturing sources that do not observe pharmaceutical patent laws.

By simply telephoning an 800 number, anyone can purchase by credit card or cashier's check a myriad of medications from a formulary of 85 popular prescription drugs. The toll-free number connects the buyer to an English-speaking person in the Bahamas. While the customer is informed that all products are generic equivalents, the manufacturing sources are not disclosed. Although a prescribing physician's name is requested, no written prescription or other documentation is required to receive the medicine.

Only after payment is received in the Bahamas are the items shipped separately, not from the Bahama Islands but from Canada. To conceal the real nature of the shipment, a flat, unlabeled blister pack of 100 individually packaged tablets is sent by ordinary mail in plain business-sized envelopes with no return address. An accompanying invoice, with no product expiration date or product source data, instructs the buyer to "TAKE ALL MEDICATION AS DIRECTED BY YOUR PHYSICIAN."

It does not take a professor of medicine to figure out that Medicine Club International is illegally dispensing medications and is endangering the health and lives of bargain-hunting United States citizens. Potent antihypertensive and cardiac agents, psychiatric drugs, immunosuppressive and anticancer treatments, antibiotics, and hormones can be purchased without any medical or regulatory control. While the potency and purity of the products may be as advertised, there is no evidence that these drugs were manufactured under strict quality controls.

A sales brochure emphasizes that "Drug prices are exorbitant because patents prevent competition." But are their generic equivalents such good buys? As an example, Medicine Club's 400 mg ibuprofen lists at \$12 for 100 tablets. In contrast, 500 generic ibuprofen tablets of identical strength manufactured in the United States can be purchased from a wholesaler for \$9.95 (suggested retail, \$19.90 for 500 tablets).

Although foreign-made medicines may be purchased overseas for personal use, travelers are required to carry them through and identify them to US Customs officials on arrival. The clandestine mailing of prescription drugs across international borders is strictly forbidden by US and foreign postal, customs, and food and drug regulations.

This illegal "international pharmacy" is not the first of such offshore clandestine operations. While Medicine Club International could be closed by seizing the Bahama Islands mail drop, disconnecting the toll-free telephone lines, or by canceling the merchant's credit card account, this will not eliminate these surreptitious schemers. The cooperation of government agencies, the pharmaceutical